

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007200**Date Inspected:** 09-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

|                                    |                                   |           |            |                                  |                          |                      |
|------------------------------------|-----------------------------------|-----------|------------|----------------------------------|--------------------------|----------------------|
| <b>CWI Name:</b>                   | Xu Yu Min, Shi Wei Song, Jin Dong |           |            | <b>CWI Present:</b>              | <b>Yes</b>               | <b>No</b>            |
| <b>Inspected CWI report:</b>       | <b>Yes</b>                        | <b>No</b> | <b>N/A</b> | <b>Rod Oven in Use:</b>          | <b>Yes</b>               | <b>No</b> <b>N/A</b> |
| <b>Electrode to specification:</b> | <b>Yes</b>                        | <b>No</b> | <b>N/A</b> | <b>Weld Procedures Followed:</b> | <b>Yes</b>               | <b>No</b> <b>N/A</b> |
| <b>Qualified Welders:</b>          | <b>Yes</b>                        | <b>No</b> | <b>N/A</b> | <b>Verified Joint Fit-up:</b>    | <b>Yes</b>               | <b>No</b> <b>N/A</b> |
| <b>Approved Drawings:</b>          | <b>Yes</b>                        | <b>No</b> | <b>N/A</b> | <b>Approved WPS:</b>             | <b>Yes</b>               | <b>No</b> <b>N/A</b> |
|                                    |                                   |           |            | <b>Delayed / Cancelled:</b>      | <b>Yes</b>               | <b>No</b> <b>N/A</b> |
| <b>Bridge No:</b>                  | 34-0006                           |           |            | <b>Component:</b>                | Tower and OBG Components |                      |

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

**Trial Assembly Area**

This QA Inspector, George Goulet, randomly observed the following in segment 3AE/3BE:

ZPMC workers were performing installation of ASTM A325 bolt sets in the deck plate U-rib connections at OBG sections 3AE/3BE. The metal containers containing the bolt sets were marked as follows: ASTM A325 – M22 x 65; Lot #'s MA871Z, KZ792Z, B9924Z; Set # DHGM220004, and Lot #'s MJ191Z, MJ511Z, C0271Z; Set # DHGM220033. It appeared to this QA Inspector, George Goulet, that the ZPMC workers were not snug tightening the bolt sets but using a hand wrench to make them tighter than hand tight.

**Bay 11**

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 11:

SMAW repair welding of weld joint ESD1-FBSA4-2A/C-18A(2) located on PCMK east tower, lift 4, skin B. Welder was identified as 046704. ZPMC QC was identified as CWI Xu Yu Min (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Wen Jie, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-345-SMAW-1G-repair which appeared on the weld record presented to this QA Inspector, George Goulet, by QC1. The ZPMC weld repair record displayed the number 0. QC1 told this QA Inspector, George Goulet, that

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

ZPMC would assign a specific number tomorrow.

SAW welding of weld joints ESD1-FESA4-2A/F-13A, 15A located on PCMK east tower, lift 4, skin E. Welder was identified as 040772. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Wen Jie, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2. Also at this location and appearing to be monitoring the welding operations was ABF Representative Zhai Xian He.

SAW welding of weld joint WSD1-FDSA4-4A/D-4A located on PCMK west tower, lift 4, skin D. Welder was identified as 042105. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-B-U2b-S-2.

SAW welding of weld joint WSD1-FESA4-4A/F-4A located on PCMK west tower, lift 4, skin E. Welder was identified as 202756. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-B-U2b-S-2.

SAW welding of weld joint WSD1-FCSA4-2A/C65A located on PCMK west tower, lift 4, skin C. Welder was identified as 040772. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-B-U2b-S-2.

Bay 10

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 10:

SMAW tack welding of weld joint NSD1-FDSA4-3A/C-15 located on PCMK north tower, lift 4, skin E. Welder was identified as 049225. ZPMC QC was identified as CWI Shi Wei Song(QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Jiang Xiao Bo, who was not a CWI. The welding variables recorded by QC2 and QC2's assistant appeared to comply with WPS-B-P-2311-B-P3.

SAW welding of weld joints NSD-TL8C/L-3A located in the bottom third on PCMK north tower shaft, lift 2, skins B to C. Welder was identified as 207746. ZPMC QC was identified as CWI Jin Dong Liang (QC3). The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

SAW welding of weld joints NSD-TL8C/L-3A located in the center third on PCMK north tower shaft, lift 2, skins B to C. Welder was identified as 040252. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

As noted above, and this QA Inspector, George Goulet, asked each QC if all the welding variables observed by QC appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. Each QC showed this QA Inspector, George Goulet, that QC was carrying the

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all QC observed did appear to comply.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

---

|                      |                 |                             |
|----------------------|-----------------|-----------------------------|
| <b>Inspected By:</b> | Goulet, George  | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Carreon, Albert | QA Reviewer                 |

---